



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



MAY 01 2014

Darrell Knox  
Styrotek Inc.  
P O Box 1180  
Delano, CA 93216

**RE: Final – Authority to Construct/Certificate of Conformity (Minor Mod)**  
**Facility Number: S-1075**  
**Project Number: S-1140273**

Dear Mr. Knox:

The Air Pollution Control Officer has issued the Authority to Construct permit to Styrotek Inc. to reduce the number of presses in the production area of its polystyrene molding operation from thirty-nine to thirty-eight, at 545 Road 176 in Delano.

Enclosed are the Authority to Construct permit and invoice for the engineering evaluation fees pursuant to District Rule 3010. The District's analysis of the proposal was sent to US EPA Region IX on April 8, 2014. No comments were received following the District's preliminary decision on this project.

Prior to operating with modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-6000.

Sincerely,

Arnaud Marjollet  
Director of Permit Services

AM:jss

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email  
Seyed Sadredin

Executive Director/Air Pollution Control Officer

Northern Region  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: 661-392-5500 FAX: 661-392-5585



## AUTHORITY TO CONSTRUCT

**PERMIT NO:** S-1075-6-26

**ISSUANCE DATE:** 04/29/2014

**LEGAL OWNER OR OPERATOR:** STYROTEK INC  
**MAILING ADDRESS:** PO BOX 1180  
DELANO, CA 93216-1180

**LOCATION:** 545 ROAD 176  
(ROAD 176 & AVENUE 4)  
DELANO, CA 93215

**SECTION:** NE32 **TOWNSHIP:** 24S **RANGE:** 26E

### EQUIPMENT DESCRIPTION:

MODIFICATION OF EXPANDED POLYSTYRENE MOLDING OPERATION, INCLUDING PRE-EXPANDER AREA, PRODUCTION AREA, AND 3.0 MM BTU/HR NATURAL GAS/LPG-FIRED REGENERATIVE THERMAL OXIDIZER (RTO) SERVING PENTANE VAPOR CONTROL SYSTEM: REDUCE THE NUMBER OF PRESSES FROM 39 TO 38

## CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801 and Tulare County 407] Federally Enforceable Through Title V Permit
5. Pre-expander area shall include two batch pre-expanders, and associated bead dryers, bin hoppers, blowers, screeners, screw conveyors, and twenty-eight 1,800 cubic foot capacity pre-expanded bead storage silos. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

  
Arnaud Marjollet, Director of Permit Services  
S-1075-6-26 Apr 29 2014 10:31AM - SANDHUG : Joint Inspection NOT Required

6. Production area shall include thirty-eight presses, belt conveyors, vacuum pumps, vacuum blowers and exhaust blowers. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Pentane control system shall include vapor collection piping network serving vacuum systems, molding machines and water drain vents and one regenerative thermal oxidizer (RTO). [District Rule 2201] Federally Enforceable Through Title V Permit
8. RTO shall incinerate VOCs recovered from the pre-expander(s), bead storage silo(s), or molding machine(s) at any time these units are in operation. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The RTO shall be equipped with an operational temperature gauge to indicate the temperature of the combustion chamber. A continuous recording device shall be utilized to indicate the combustion chamber temperature during operation. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
11. Sampling ports adequate for extraction of grab samples, measurement of gas flow rate, and use of an FID, PID, or other District-approved VOC detection device shall be provided for both the influent and the effluent gas streams. [District Rule 1081] Federally Enforceable Through Title V Permit
12. Pentane content of raw bead supply shall not exceed 4.2% by weight on an annual average basis. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
13. Raw beads processed shall not exceed 128,310 pounds/day or 32,027,500 pounds/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Only natural gas and propane shall be used as auxiliary fuel for the combustion of VOC. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Minimum volatile organic compound control efficiency across the RTO shall be 99% by weight. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
16. Minimum VOC (pentane) capture and control efficiency, calculated as VOC vapor capture efficiency multiplied by RTO control efficiency divided by 100, shall be 93% by weight. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
17. The total VOC emissions from the EPS molding operation including fugitive and RTO combustion emissions shall not exceed 140.0 pounds in any one day or 34,982 lb/year. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The minimum operating temperature for the combustion chamber of the RTO shall be maintained at or above 1400 degrees F. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Combustion emission rates from RTO shall not exceed any of the following: NO<sub>x</sub> (as NO<sub>2</sub>): 117.0 ppmv @ 3% O<sub>2</sub> or 0.142 lb/MMBTU, CO: 100 ppmv @ 3% O<sub>2</sub> or 0.0737 lb/MMBTU, SO<sub>x</sub> (as SO<sub>2</sub>) 0.0164 lb/MMBtu, PM<sub>10</sub>: 0.0076 lb/MMBtu, or VOC: 0.0054 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit
20. RTO inlet ductwork and exhaust stack shall be equipped with adequate provisions facilitating the collection of samples from both the influent and the effluent gas stream sampling ports consistent with EPA test methods, i.e. capped sample port in accessible location of uniform flow. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Permittee shall monitor and record the pressure upstream of the condenser (water knockout box) on a weekly basis to document that the system is under vacuum. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
22. Vapor control system capture efficiency shall be demonstrated annually by using the following calculation procedure:  $e \times f / (a \times b - c \times d)$  where a = pentane content of raw beads (lb/ton), b = raw bead input rate (tons/hr), c = pentane content of product (lb/ton), and d = product output rate (tons/hr), e = pentane vapor concentration at RTO inlet (lb/scf), f = flow rate into RTO (scf/hr). [District Rules 1070 and 4682] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. For demonstration of vapor control system capture efficiency through source testing, at least three test runs covering at least one production cycle and at least 3 hours and no more than 24 hours in duration shall be conducted to determine capture efficiency. Protocols for data analysis must either meet the data quality objective (DQO) or lower confidence limit (LCL) approaches as described in EPA "Guidelines for Determining Capture Efficiency." January 9, 1995 and 40 CFR 51 Appendix M, Methods 204-204F, as applicable. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
24. Source testing shall be conducted annually to measure the following: 1) VOC emissions from the RTO and 2) RTO control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Source testing shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
28. During operation of the RTO, the permittee shall monitor and record combustion chamber temperatures at least once every 15 minutes. The temperature readings shall be at or above 1,400 F during which the pentane vapors are being combusted in the RTO. Upon detecting any excursion below the 1,400 F temperature reading, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule 4682 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. The RTO's burner and its associated components and the vapor collection system shall be inspected thoroughly on an annual basis. The records of inspection shall at least contain date and time of inspection, identification of the person performing an inspection, parts replacement and repairs, and all maintenance actions taken. The records shall be kept and maintained for compliance inspection upon request. [40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
31. Vapor control system shall be visually and audibly inspected for leaks weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
32. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
33. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
34. Permittee shall maintain daily records of RTO temperature, raw bead pentane content, and pounds of raw beads processed. [District Rules 1070 and 4682] Federally Enforceable Through Title V Permit
35. Permittee shall maintain records of vapor control system capture efficiency and RTO control efficiency. [District Rules 1070 and 4682] Federally Enforceable Through Title V Permit
36. Permittee shall maintain a record of all periods of non-operation of the RTO, including the dates, duration and reason(s) for the unit not being operated. [District Rule 2201] Federally Enforceable Through Title V Permit
37. All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 2201 and 4682] Federally Enforceable Through Title V Permit
38. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: Tulare County Rule 407, SJVUAPCD Rules 1081, 4201, and 4682. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit